

A NEW SPECIES OF *OEDASPIS* LOEW AND NEW RECORDS OF OTHER FRUIT FLIES (INSECTA: DIPTERA: TEPHRITIDAE) FROM NEW CALEDONIA

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The number of fruit fly species known from New Caledonia is increased to 29. *Oedaspis ouinensis* sp. nov. is described from Mt Ouin, while *Piestometopon distinctum* (Permkam & Hancock) and *Ornithoschema mallochii* Hardy are newly recorded from the territory. The presence of *Bactrocera trilineola* Drew in the Loyalty Islands is confirmed. □ *Fruit flies, New Caledonia, new records, eastern Australia.*

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Norrbom & Hancock (2004) reviewed the fruit fly fauna of New Caledonia and recorded 25 species. The pest species *Bactrocera trilineola* Drew was added to the list by Mille (in press). Further collecting, by staff of the Queensland Museum, Brisbane (QM), has provided additional records of ten species, including two new records for the territory and one new species.

A feature of this fauna, strengthened by the present records, is its apparent relationship with that of eastern Australia, particularly Queensland. Several species are shared, not all of which can be attributed to human introduction, while others are closely related to northeastern Australian species, including the new species of *Oedaspis* Loew described below.

SYSTEMATICS

Subfamily DACINAE
Tribe Dacini

***Bactrocera* (*Bactrocera*)
psidii (Froggatt, 1899)**

MATERIAL. NEW CALEDONIA: 1♀, Nehoue camp-ground, 20°25'S, 164°13'E, 29.iv.2005, G.B. Monteith, MV light, 10m (in QM).

COMMENTS. This species appears to be widespread in New Caledonia.

***Bactrocera* (*Bactrocera*)
trilineola Drew, 1989**

MATERIAL. NEW CALEDONIA: 3♂♂, 1♀, Maré, 5.vii.1993 (1♂), 2.viii.1993 (2♂♂), 16.viii.1993 (♀), ex cue-lure trap (in Station Recherches Fruitières de Poquereux [SRFP], La Foa, New Caledonia).

COMMENTS. This species is widespread in Vanuatu. In New Caledonia it is known only

from Maré and Lifou in the Loyalty Islands (C. Mille, pers. comm.). The above specimens were previously misidentified as *B. frauenfeldii* (Schiner).

Subfamily PHYTALMIINAE
Tribe Acanthonevrini
Austronevra irwini
Norrbom & Hancock, 2004

MATERIAL. NEW CALEDONIA: 1♀, Col d'Amieu, west slope, 21°37'S, 165°49'E, 480m, 7.i.2005, G.B. Monteith, MV light, rainforest (QM).

COMMENTS. This species is known only from New Caledonia. Elsewhere, the genus *Austronevra* Permkam & Hancock is known only from rainforests of northeastern Queensland, where two additional species occur (Permkam & Hancock, 1995).

***Dirioxa pornia* (Walker, 1849)**

MATERIAL. NEW CALEDONIA: 2♀♀, Foret Nord, site 2.malaise, 22°19'S, 166°55'E, 200m, 2–22.xii.2004, [C.] Burwell, [S.] Wright, rainforest; 2♀♀, same data except 22.xii.2004–9.i.2005; 1♀, Nehoue camp-ground, 20°25'S, 164°13'E, 29.iv.2005, G.B. Monteith, MV light, 10m (all QM).

COMMENTS. This fruit-infesting species appears to have been introduced into New Caledonia from eastern Australia, where it is widespread.

Subfamily TEPHRITINAE
Tribe Dithrycini
Subtribe Platensina
***Oedaspis ouinensis* sp. nov.**
(Fig. 1A)

ETYMOLOGY. Named after the type locality, Mt Ouin.

MATERIAL, HOLOTYPE ♂: NEW CALEDONIA: 11152, 22°01'S, 166°28'E, Mt Ouin, 1100m, 9.xi.2002, S. Wright, beating (in Muséum National d'Histoire Naturelle [MNHN], Paris).

DESCRIPTION. Male. Length of body 5mm, of wing 5mm. Head higher than long, with antennae situated at upper quarter; yellow-brown, tending red-brown on frons and occiput; face gently concave; antennae shorter than face, with third segment red-brown, twice as long as wide, apically rounded with a slight dorsoapical projection; pilinum extruded in holotype. Setae well developed and black except upper orbitals, outer verticals, postocellars and row of postoculars thin and yellow; 5 pairs frontals; 2 pairs orbitals; 1 pair ocellars; 1 pair inner verticals.

Thorax red-brown except for a black pattern over posterior part of scutum, extending anterolaterally to suture and medially to anterior margin as narrowing vittae and over disc of scutellum; covered with fine, pale microtrichia and short, recumbent yellow setulae. Setae well developed and dark brown to black: 1 pair dorsocentrals situated slightly closer to suture than to line of anterior supra-alars; anepisternum with 1 thick upper and 3 thinner lower setae, plus 2 thin inner setae; 2 pairs scutellars, the apical pair about three-quarters length of basals and crossed near apex. Scutellum almost flat, disc slightly convex. Legs yellow-brown; hind femur without a preapical dorsal seta.

Wing pattern (Fig. 1A) largely brown, tending yellowish basally and in central portion, with medial part of cell *c* and behind it to cell *bcu* diffusely paler and the following hyaline markings across apical two-thirds of wing: a narrow, rectangular band across cell *r*₁ at apex of vein *R*₁; four narrow, transverse bands extending to hind wing margin, 2 in cell *cu*₁, the subbasal one slightly oblique (the anterior end more distal) and extending from vein *R*₄₊₅ and the subapical one extending from vein *M*, and 2 bands ending in cell *m*, slightly oblique (with anterior ends more proximal), the subbasal band extending from cell *r*₂₊₃ and the subapical one from middle of cell *r*₄₊₅; all hyaline bands narrower than the dark bands between them; apex of wing brown with no hyaline marginal marking, the infuscated area is largely brown, except yellowish anteromedially in the three middle brown bands and basal parts of cells *r*₂₊₃ and *dm*; anal lobe and patterned areas of cells *cu*₁ and *m* largely brown; pterostigma (cell *sc*) dark brown. Setae on vein *R*₁ uninterrupted opposite

apex of vein *Sc*; vein *R*₄₊₅ bare; R-M crossvein situated at apical three-quarters of cell *dm*, about its own length from DM-Cu crossvein; cell *bcu* apically produced and acute.

Abdomen reddish-brown, tending yellowish on terga I+II; terga III to V mostly blackish-brown, with lateral and posterior margins narrowly yellow-brown; with brownish microtrichia and short, fine dark setulae. Genitalia red-brown; distiphallus with the glans elongate, slightly swollen and with a membranous apical extension, similar in appearance to that of *O. mouldsi* (see Hardy & Drew 1996: fig. 104).

Female unknown.

DISTRIBUTION. Known only from the type locality in New Caledonia.

COMMENTS. This species most closely resembles *Oedaspis mouldsi* Hardy & Drew, from Mt Lewis and Mt Misery in northern Queensland (Hardy & Drew, 1996) and, like that species, has the hyaline bands in the posterior part of the wing much narrower than the dark bands between them. It differs from *O. mouldsi* in having the apex of the wing entirely brown without a hyaline apical spot in cells *r*₂₊₃ and *r*₄₊₅, and in the largely blackish-brown abdominal terga III-V.

Oedaspis is primarily a Palaearctic-Afrotropical genus but it is also well represented in Australia, where some 20 species are known (Hardy & Drew, 1996; Hancock, 2001). However, this new species is the first record of the genus from New Caledonia or any other Pacific Island territory. Species with known biologies form stem galls on Asteraceae and Goodeniaceae.

Tribe Tephritini

Dioxya conflicta (Curran, 1929)

MATERIAL. NEW CALEDONIA: 1♀, Cap Ndoua, site I, 22°23'S, 166°56'E, 28.xi.2004, S.G. Wright, sweeping, rainforest (QM).

COMMENTS. This species appears to be widespread in the South Pacific, occurring as far east as Samoa and Niue (Hancock & McGuire, 2001).

Tetreuaresta obscuriventris (Loew, 1873) (Fig. 1B)

MATERIAL. NEW CALEDONIA: 1♂, Mandjelia, lower creek, 600m, 20°24'S, 164°31'E, 12.xii.2004, G. Monteith, MV light, rainforest; 4♂♂, 8♀♀, Fausse Yate bridge, 5m, 22°10'S, 166°56'E, 22.iv.2005, G.B. Monteith, beating (all QM).



FIG. 1. Wings. (A) *Oedaspis ouinensis* sp. nov.; (B) *Tetruaresta obscuriventris*; (C) *Ornithoschema mallochi*.

COMMENTS. This Neotropical species has a distinctive wing pattern (Fig. 1B) and appears to be widespread in New Caledonia. Originally introduced to Hawaii and Fiji for the biological control of *Elephantopus mollis* (Asteraceae), it also occurs in Tonga (Hancock & Drew, 1994; Norrbom & Hancock, 2004).

Subfamily TRYPETINAE
Tribe Adramini
Euphranta hardyi
Norrbom & Hancock, 2004

MATERIAL. NEW CALEDONIA: 2♂♂, 4♀♀, Mandjelia summit, 20°24'S, 164°32'E, 780m, 11-12.xii.2004, G. Monteith, rainforest, yellow pans (QM).

COMMENTS. This species is known only from New Caledonia.

Euphranta leihhardti
Permkam & Hancock, 1995

MATERIAL. NEW CALEDONIA: 1♂, Nehou campground, 10m, 20°25'S, 164°13'E, 29.iv.2005, G.B. Monteith, MV light (QM).

COMMENTS. This species was described from eastern Australia (Permkam & Hancock, 1995) and first recorded from New Caledonia by Norrbom & Hancock (2004).

Piestometopon distinctum
(Permkam & Hancock, 1995)

MATERIAL. NEW CALEDONIA: 1♀, Nehou campground, 20°25'S, 164°13'E, 29.iv.2005, G.B. Monteith, MV light, 10m (QM).

COMMENTS. This species was described from southeastern Queensland (Permkam & Hancock, 1995, as *Elleipsa distincta*) and is newly recorded from New Caledonia.

Tribe Rivelliomimini
Ornithoschema mallochi Hardy, 1992
(Fig. 1C)

MATERIAL. NEW CALEDONIA: 1♂, Nehou campground, 20°25'S, 164°13'E, 29.iv.2005, G.B. Monteith, MV light, 10m (QM).

COMMENTS. This little-known species was described from Guam, Micronesia (Malloch, 1942; Hardy & Adachi, 1956, as *Cycasia oculata* Malloch) and is newly recorded from New Caledonia. The above specimen differs from the type series in details of the wing pattern (Fig. 1C): the transverse yellow-brown band

across the R-M crossvein is connected to the costal band by a yellow area in cell r_1 and to the band across the DM-Cu crossvein along the wing margin in cell cu_1 . All other characters appear identical, including the pair of distinct, shiny black bullae on abdominal tergite V and it is possible that the Guam series is general or faded. Pending the availability of further material, the New Caledonia specimen is regarded as conspecific. The name *O. mallochi* Hardy was proposed as a replacement name for the preoccupied *O. oculatum* (Malloch) (Hardy, 1992) and *O. pacifica* Hancock & Drew, proposed for the same reason (Hancock & Drew, 1994), is a synonym (Permkam & Hancock, 1995).

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